

Notice of Allowability

Application No.

10/646,387

Examiner

Kanji Patel

Applicant(s)

LI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to COMMUNICATION ON 5/24/07 AND AMENDMENT FILED 5/15/07.
2. ☒ The allowed claim(s) is/are 6, 8-14, 39, 41-47, 72, 74, 76-80, 100-102.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Election/Restrictions

1. This application contains claims directed to the following patentably distinct

Species I: drawn to Figures 7-8. Corresponding claims are 6, 8-14, 39, 41-47, 72, 74-80 and 100-102.

Species II: drawn to Figure 9. Corresponding claims are 19-33, 52-66, 85-99 and 103.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there is no generic claim.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election. The species are independent or distinct because Species I requires wavelet transformation for detecting blur while species II requires Cepstrum analysis for detecting the blur.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

During a telephone conversation with Kayla D. Brant on 5/24/07 a provisional election was made without traverse to prosecute the invention of Species I, claims 6, 8-14, 39, 41-47, 72, 74-80, and 100-102. Affirmation of this election must be made by applicant in replying to this Office action. Claims 16-33, 48-66 and 81-99 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kayla D. Brant on 5/24/07.

The application has been amended as follows:

In the claims:

Cancel claims 19-33, 52-66, 85-99 and 103

Response to Amendment

3. Applicant's amendment filed 5/15/07 has been entered and made of record.

By this amendment, claims 1-5, 7, 15-18, 34-38, 40, 48-51, 67-71, 73 and 81-84 are cancelled.

Claims 19-33, 52-66, 85-99 and 103 were cancelled by the examiner's amendment.

Claims 6, 8-14, 39, 41-47, 72, 74-80 and 100-102 are pending in the present application.

In response to applicant's amendment to independent claims 6, 8, 10, 39, 41, 43, 72, 74 and 76 by including the allowable subject matter as set forth in last Office action mailed 1/26/07, the rejections under 35 USC 102 and 35 USC 103(a) have been withdrawn.

Allowable Subject Matter

4. The following is an examiner's statement of reasons for allowance:

Claims 6, 8-14, 39, 41-47, 72, 74-80 and 100-102 (renumbered as 1-17, 19-20, 22-26, 18, 21 and 27, respectively) are allowed.

None of the prior art on record teaches or suggests detecting blur in at least the portion of the digital image based on the resulting edge maps by:

normalizing a total edge amplitude of the edge map:

$$E_{map}(k, l) = E_{map}(k, l) / \max(E_{map}),$$

partitioning the edge map into edge map blocks, determining a maximal edge amplitude in each of the edge map blocks and using it to represent the respective edge

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map block and using E_{maxi} , to denote a discretization result of E_{mapi} , for each of the edge map blocks as recited in claims 6, 39 and 72. Also, non of the prior art teaches or fairly suggest, generating at least one edge map for each of the resolution levels, wherein generating at least one edge map for each of the resolution levels includes constructing the edge map in scale i and detecting blur in at least the portion of the digital image based on the resulting edge maps as required by claims 8, 41 and 74. Furthermore, non of the prior art teaches or fairly suggest, generating at least one edge map for each of the resolution levels and detecting blur in at least the portion of the digital image based on the resulting edge maps by amplitude variations of corresponding edge nodes in at least two different edge maps of at least two different levels as required by claims 10, 43 and 76.


5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kanji Patel whose telephone number is (571) 272-7454. The examiner can normally be reached on Monday to Thursday from 8 a.m. to 6:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lillis Eileen can be reached on (571) 272-6928 The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kanji Patel
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5/25/07


KANJIBHAI PATEL
PRIMARY EXAMINER